

Not entered.

repr

-on-

--on--

*Entered to
the claims
only.
ad*

*Marg^{writer} unit
Jones*

3-22-01

Not
entered

at line 6, by replacing "on board" with --on-board--.

Please amend Claim 12, at lines 4 and 10, by replacing "on board" with --on-board--.]

Please add new Claims 21-50 as follows:

21. A sound reproducing system for a model train traveling on a plurality of rails that uses an amplified digital control signal for propulsion and control, the system comprising:

a sound unit;

a memory within the sound unit wherein the memory stores a plurality of sound effects at addresses wherein the sound effects contain multiple samples that emulate a train locomotive at various conditions; and

a controller connected to the memory for recalling at least one of the sound effects wherein the controller is controlled by a digital signal.

[22. The system of Claim 21 wherein the sound effects are at pre-determined addresses.

23. The system of Claim 21 wherein the controller recalls a plurality of sound effects.

24. The system of Claim 23 wherein the plurality of sound effects are recalled in a predetermined sequence.

25. The system of Claim 23 wherein the plurality of sound effects are recalled in a random sequence.

26. The system of Claim 21 wherein the various conditions include various speeds.

27. The system of Claim 21 wherein the various conditions include various workloads.

28. The system of Claim 21 wherein the memory includes a plurality of special effects stored therein and further wherein the

model train includes a motor wherein the controller controls the motor.

29. The system of Claim 21 wherein the digital signal is a bi-polar digital signal.

30. The system of Claim 21 wherein the digital signal is a digital packet wherein the digital packet triggers the sound effect.

31. The system of Claim 21 further comprising:
an electrical power supply connected to at least one of the plurality of rails;

a pick-up means for collecting the digital signal; and
a full-wave bridge rectifier connected to the electrical power supply and further having an input for receiving the digital signal and an output wherein the output produces a DC signal without regard to phase of the digital signal.

32. The system of Claim 21 wherein the memory includes a plurality of special effects stored therein and further wherein the model train includes a motor and means for simultaneously decoding the digital signal for control of the sound effects, the motor and/or the special effects.

33. The system of Claim 21 further comprising:
a fixed external source of electrical power;
means for connecting the digital signal to the sound memory;
and
means for filtering the digital signal.

34. The system of Claim 21 further comprising:
a speed sync sensor in the controller wherein the controller recalls a plurality of speed sensitive sounds to emulate a speed of the train locomotive based on a speed of the model train wherein

the speed sync sensor synchronizes the speed sensitive sounds with the speed of the model train.

35. The system of Claim 21 wherein the controller recalls the sound effects in an asynchronous manner.

36. The system of Claim 21 further comprising:

a second memory for storing the plurality of sound effects.

37. The system of Claim 21 further comprising:

a discrete address in the range of 1 to 127 contained within the sound unit wherein the digital signal includes a three byte packet wherein the three byte packet includes an address header that matches the discrete address.

38. The system of Claim 21 further comprising:

a discrete address in the range of 1 to 9999 contained within the sound unit wherein the digital signal includes a four byte packet wherein the four byte packet includes an address header that matches the discrete address.

39. The system of Claim 21 further comprising:

wheels on the model train;

a digital packet within the digital signal for controlling a speed of the model train; and

means for synchronizing the plurality of sound effects to the wheels of the model train wherein the synchronization means decodes the digital packet and further wherein the synchronization means determines which sound effect to synchronize with the speed of the model train using the digital packet.

40. The system of Claim 21 wherein the memory includes a plurality of special effects stored therein and further wherein the model train includes a motor and further wherein the model train includes a micro-controller that decodes a digital signal for

control of the sound effects, the motor and/or the special effects.

41. The system of Claim 21 wherein the memory includes a plurality of special effects stored therein wherein the special effects include a lighting special effect and further wherein the controller controls the special effects.

42. The system of Claim 40 wherein the plurality of sound effects has a volume controlled by the micro-controller.

43. The system of Claim 40 wherein the sound effects are divisible by 14, 28 or 128 speed steps controlled by the micro-controller.

44. The system of Claim 40 wherein the micro-controller is programmed to control the sound effects.

45. The system of Claim 21 wherein the sound effects are digitized.

46. The system of Claim 21 further comprising:
a microphone on the sound unit for recording an additional sound effect.

47. The system of Claim 21 further comprising:
an activation means for activating the sound effect wherein the activation means is a magnetically responsive sensor.

48. The system of Claim 21 further comprising:
means for controlling a variable filter network wherein the variable filter network suppresses audible noise.

49. The system of Claim 21 wherein the sound effects include a sample that emulates a train locomotive at multiple speeds.

50. The system of Claim 21 wherein the stored sound effects are analog.

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22. The system of Claim 21 wherein the sound effects are at pre-determined addresses.

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25. The system of
Claim 23 wherein the

Author	Year	Country	Sample Size	Age Range	Gender	Study Type	Findings
Wang et al.	2008	China	1,000	10-12	Male	Experimental	High levels of aggression in boys with conduct disorder.
Wang et al.	2009	China	1,000	10-12	Male	Experimental	High levels of aggression in boys with conduct disorder.
Wang et al.	2010	China	1,000	10-12	Male	Experimental	High levels of aggression in boys with conduct disorder.
Wang et al.	2011	China	1,000	10-12	Male	Experimental	High levels of aggression in boys with conduct disorder.
Wang et al.	2012	China	1,000	10-12	Male	Experimental	High levels of aggression in boys with conduct disorder.
Wang et al.	2013	China	1,000	10-12	Male	Experimental	High levels of aggression in boys with conduct disorder.
Wang et al.	2014	China	1,000	10-12	Male	Experimental	High levels of aggression in boys with conduct disorder.
Wang et al.	2015	China	1,000	10-12	Male	Experimental	High levels of aggression in boys with conduct disorder.
Wang et al.	2016	China	1,000	10-12	Male	Experimental	High levels of aggression in boys with conduct disorder.
Wang et al.	2017	China	1,000	10-12	Male	Experimental	High levels of aggression in boys with conduct disorder.
Wang et al.	2018	China	1,000	10-12	Male	Experimental	High levels of aggression in boys with conduct disorder.
Wang et al.	2019	China	1,000	10-12	Male	Experimental	High levels of aggression in boys with conduct disorder.
Wang et al.	2020	China	1,000	10-12	Male	Experimental	High levels of aggression in boys with conduct disorder.
Wang et al.	2021	China	1,000	10-12	Male	Experimental	High levels of aggression in boys with conduct disorder.
Wang et al.	2022	China	1,000	10-12	Male	Experimental	High levels of aggression in boys with conduct disorder.
Wang et al.	2023	China	1,000	10-12	Male	Experimental	High levels of aggression in boys with conduct disorder.
Wang et al.	2024	China	1,000	10-12	Male	Experimental	High levels of aggression in boys with conduct disorder.
Wang et al.	2025	China	1,000	10-12	Male	Experimental	High levels of aggression in boys with conduct disorder.

32. The system of Claim 21 wherein the memory includes a plurality of special effects stored therein and further wherein the model train includes a motor and means for simultaneously decoding the digital signal for control of the sound effects, the motor and/or the special effects.

a fixed external source of electrical power;

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on a speed of the model

train wherein the speed
s y n c s e n s o r
synchronizes the speed
sensitive sounds with
the speed of the model
train.

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the digital signal
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three byte packet
includes an address
header that matches the
discrete address.

38. The system of
Claim 21 further
comprising:

a discrete address
in the range of 1 to
9999 contained within
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includes a four byte
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matches the discrete
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39. The system of Claim 21 further comprising:

wheels on the model train;

a digital packet within the digital signal for controlling a speed of the model train; and

means for synchronizing the plurality of sound effects to the wheels of the model train wherein the synchronization means decodes the digital packet and further wherein the synchronization means determines which sound effect to synchronize with the speed of the model train using the digital packet.

40. The system of Claim 21 wherein the memory includes a plurality of special effects stored therein and further wherein the model train includes a motor and further wherein the model train includes a micro-controller that decodes a digital signal for control of the sound effects, the motor and/or the special effects.

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